## THE OCCURRENCE IN THE PHILIPPINE ISLANDS OF THE FRESH-WATER AMPHIPOD PARACALLIOPE FLUVIATILIS (G. M. THOMSON)

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The amphipod Paracalliope fluviatilis was described in 1879 by G. M. Thomson, under the name Calliope fluviatilis, as occurring in fresh-water streams near Dunedin, New Zealand. Subsequently it was found to be common in fresh-water streams in all parts of New Zealand and to occur also in harbors, tidal estuaries, etc., where the water was brackish or at times quite salt. In 1899 Stebbing established the genus Paracalliope for this species and in 1906 he referred to it the species that had been described by W. A. Haswell in 1880 as Pherusa australis from specimens obtained at Botany Bay. Though nothing was said about the exact circumstances under which these specimens were found, it is to be presumed that they were taken in salt waters. Although I have been unable to obtain specimens of Pherusa australis from Australia for comparison, I feel confident that Stebbing is right in considering that species as a synonym of Paracalliope fluviatilis.

Recently when examining the amphipods from Chilka Lake, India, I found numerous specimens of Paracalliope fluviatilis from different localities in the lake and others from Adyar River near Madras. Apparently it occurs on the shores of India under similar conditions to those in New Zealand. About a month after the manuscript of my report on the Chilka Lake amphipoda had been posted I received a few amphipoda from the Philippine Islands sent by Prof. C. F. Baker, and among them there were several specimens of Paracalliope fluviatilis from Nasugbu, "shallow water." Along with them was a single specimen of Photis longicaudata (Bate and Westw.), but there was no record as to whether the specimens were obtained in fresh water or in salt. The specimens both from Chilka Lake

<sup>&</sup>lt;sup>1</sup> Das Tierreich, Amphipoda, p. 297.

and from the Philippine Islands agree very closely with those from New Zealand, and I can find no difference of specific importance.

As Paracalliope fluviatilis appears to be confined to fresh and brackish water near the coast, its wide distribution in India, Philippine Islands, and New Zealand will help to throw light on the changes in the land areas of these regions that must have occurred to account for its present distribution. In this connection it may be mentioned that Paracorophium excavatum (G. M. Thomson), another amphipod occurring in brackish and fresh waters of New Zealand, has recently been sent to me from brackish waters in Brisbane River, Queensland, Australia.

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